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NEWS 11 FEB 02 Simultaneous left and right truncation (SLART) added for CERAB, COMPUB, ELCOM, and SOLIDSTATE
NEWS 12 FEB 02 GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 13 FEB 06 Patent sequence location (PSL) data added to USGENE
NEWS 14 FEB 10 COMPENDEX reloaded and enhanced
NEWS 15 FEB 11 WTEXTILES reloaded and enhanced
NEWS 16 FEB 19 New patent-examiner citations in 300,000 CA/Cplus patent records provide insights into related prior art
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NEWS 19 FEB 23 MEDLINE now offers more precise author group fields and 2009 MeSH terms
NEWS 20 FEB 23 TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 Mesh terms
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NEWS 22 FEB 25 USGENE enhanced with patent family and legal status display data from INPADOCDB
NEWS 23 MAR 06 INPADOCDB and INPAPAMDB enhanced with new display formats
NEWS 24 MAR 11 EPFULL backfile enhanced with additional full-text applications and grants
NEWS 25 MAR 11 ESBIOTBASE reloaded and enhanced
NEWS 26 MAR 20 CAS databases on STN enhanced with new super role for nanomaterial substances
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| | SINCE FILE
ENTRY | TOTAL
SESSION |
|--|---------------------|------------------|
| | 0.22 | 0.22 |

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DICTIONARY FILE UPDATES: 31 MAR 2009 HIGHEST RN 1130556-28-3

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<http://www.cas.org/support/stn/gen/stndoc/properties.html>

=> s trihydroxysilylpropyl sulfonic acid

394954 SULFONIC

1593355 ACID

8370 ACID

99385 ACID

(A)

TRIHYDROXYSILYLPR

(TRIHYDROXYMETHYL)SILYLPROPYL (W) SULFONIC (W) ACID)

=> s trihydroxy silyl propyl sulfonic acid
92184 TRIHYDROXY
735438 SILYL
4539068 PROPYL
4 PROPYLS
4539068 PROPYL
(PROPYL OR PROPYLS)
394954 SULFONIC
11593355 ACID
8370 ACIDS
11599385 ACID
(ACID OR ACIDS)
L2 0 TRIHYDROXY SILYL PROPYL SULFONIC ACID
(TRIHYDROXY(W)SILYL(W)PROPYL(W)SULFONIC(W)ACID)

=> s trihydroxy silyl propyl phosphonic acid
92184 TRIHYDROXY
735438 SILYL
4539068 PROPYL
4 PROPYLS
4539068 PROPYL
(PROPYL OR PROPYLS)
142602 PHOSPHONIC
11593355 ACID
8370 ACIDS
11599385 ACID
(ACID OR ACIDS)
L3 0 TRIHYDROXY SILYL PROPYL PHOSPHONIC ACID
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=> s trihydroxy silyl perfluoro octyl sulfonic acid
92184 TRIHYDROXY
735438 SILYL
7329 PERFLUORO
1 PERFLUOROS
7329 PERFLUORO
(PERFLUORO OR PERFLUOROS)
280402 OCTYL
394954 SULFONIC
11593355 ACID
8370 ACIDS
11599385 ACID
(ACID OR ACIDS)
L4 0 TRIHYDROXY SILYL PERFLUORO OCTYL SULFONIC ACID
(TRIHYDROXY(W)SILYL(W)PERFLUORO(W)OCTYL(W)SULFONIC(W)ACID)

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 103.57 | 103.79 |

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FILE COVERS 1907 - 2 Apr 2009 VOL 150 ISS 14
FILE LAST UPDATED: 1 Apr 2009 (20090401/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s us 20060166085/pn
L5          1 US 20060166085/PN
              (US20060166085/PN)
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=> d 1 all
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L5  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2009 ACS on STN
AN  2004:198217  CAPLUS
DN  140:220730
ED  Entered STN: 11 Mar 2004
TI  Method of fabrication of ion-conductive battery separator for lithium
batteries.
IN  Hennige, Volker; Hyning, Christian; Hoerpel, Gerhard
PA  Creavis Gesellschaft fuer Technologie und Innovation m.b.H., Germany
SO  Ger. Offen., 19 pp.
CODEN: GWXXBX
DT  Patent
LA  German
IC  ICM H01M002-14
     ICS H01M10-38
CC  52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
FAN.CNT 1
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| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| PI DE 10240032 | A1 | 20040311 | DE 2002-10240032 | 20020827 |
| CA 2496841 | A1 | 20040311 | CA 2003-2496841 | 20030721 |
| WO 200402177 | A1 | 20040311 | WO 2003-EP7933 | 20030721 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003250125 | A1 | 20040319 | AU 2003-250125 | 20030721 |
| EP 1532701 | A1 | 20050525 | EP 2003-790805 | 20030721 |
| EP 1532701 | B1 | 20060104 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |

| | | | | |
|-----------------------|----|----------|----------------|--------------|
| CN 1679185 | A | 20051005 | CN 2003-820566 | 20030721 |
| CN 100397681 | C | 20080625 | | |
| JP 2005536860 | T | 20051202 | JP 2004-531810 | 20030721 |
| AT 315277 | T | 20060215 | AT 2003-790805 | 20030721 |
| US 20060166085 | A1 | 20060727 | US 2004-519097 | 20041227 <-- |
| IN 2004CN03105 | A | 20060217 | IN 2004-CN3105 | 20041231 |
| PRAI DE 2002-10240032 | A | 20020827 | | |
| WO 2003-EP7933 | W | 20030721 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|----------------|-------|--|
| DE 10240032 | ICM | H01M002-14 |
| | ICS | H01M010-38 |
| | IPCI | H01M0002-14 [ICM,7]; H01M0010-38 [ICS,7]; H01M0010-36 [ICS,7,C*] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| CA 2496841 | IPCI | H01M0002-16 [ICM,7] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| WO 2004021477 | IPCI | H01M0002-16 [ICM,7] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| AU 2003250125 | IPCI | H01M0002-16 [ICM,7] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| EP 1532701 | IPCI | H01M0002-16 [I,C*]; H01M0002-16 [I,A] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| CN 1679185 | IPCI | H01M0002-16 [I,C*]; H01M0002-16 [I,A] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| | ECLA | H01M002/16B3; H01B001/12F; H01M002/16C1; H01M002/16D; H01M010/42M; T01M; T01M |
| JP 2005536860 | IPCI | H01M0002-16 [ICM,7]; H01M0010-40 [ICS,7]; H01M0010-36 [ICS,7,C*] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| | FTERM | 5H021/BB01; 5H021/BB12; 5H021/CC01; 5H021/CC03; 5H021/CC04; 5H021/EE21; 5H021/EE22; 5H021/HH03; 5H021/HH06; 5H029/AJ03; 5H029/AK03; 5H029/AL07; 5H029/AM03; 5H029/AM05; 5H029/AM07; 5H029/CJ02; 5H029/CJ22; 5H029/CJ23; 5H029/DJ04; 5H029/DJ15; 5H029/DJ16; 5H029/EJ03; 5H029/EJ05; 5H029/HJ04; 5H029/HJ14 |
| AT 315277 | IPCI | H01M0002-16 [ICS,7] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0010-36 [I,C*]; H01M0010-38 [I,A]; H01M0010-40 [I,A] |
| US 20060166085 | IPCI | H01M0004-00 [I,A]; H01M0002-14 [I,A]; B05D0005-12 [I,A]; B05D0003-12 [I,A]; B05D0001-02 [I,A]; B05D0001-18 [I,A] |
| | IPCR | H01M0002-16 [I,C*]; H01M0002-16 [I,A]; H01M0004-00 [I,A]; B05D0001-02 [I,C]; B05D0001-02 [I,A]; B05D0001-18 [I,C]; B05D0001-18 [I,A]; B05D0003-12 |

[I,C]; B05D0003-12 [I,A]; B05D0005-12 [I,C];
B05D0005-12 [I,A]; H01M0002-14 [I,C]; H01M0002-14
[I,A]; H01M0004-00 [I,C]; H01M0010-36 [I,C*];
H01M0010-38 [I,A]; H01M0010-40 [I,A]
429/128.000; 427/115.000; 427/355.000; 427/421.100;
427/430.100; 429/129.000

IN 2004CN03105 IPC1 H01M0002-16 [ICM,7]

AB The invention concerns separators for lithium batteries as well as a procedure for their production and use. The separator is based on a laminar, flexible substrate with a plurality of openings. The substrate has a porous, inorg., elec. insulating coating, which closes the openings in the substrate. The material of the substrate is selected from woven or nonwoven, elec. nonconductive polymer fibers and the inorg. elec. conductive coating contains metallic oxide particle. The separator has Li-ion conducting characteristics without the presence electrolytes. After loading with addnl. Li-ion conductive electrolytes, a clearly higher ionic conduction is observed than in the case of conventional combinations of lithium ion conductive separators and electrolyte. The separators according to invention are especially suitable for application in lithium heavy-duty batteries.

ST lithium battery separator fabrication

IT Phosphate glasses
RL: DEV (Device component use); USES (Uses)
(lithium phosphate zirconate; method of fabrication of ion-conductive battery separator for lithium batteries.)

IT Secondary batteries
(lithium; method of fabrication of ion-conductive battery separator for lithium batteries.)

IT Coating materials
Electric insulators
Secondary battery separators
(method of fabrication of ion-conductive battery separator for lithium batteries.)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(method of fabrication of ion-conductive battery separator for lithium batteries.)

IT Sulfonic acids, uses
RL: DEV (Device component use); USES (Uses)
(salts, lithium salt; method of fabrication of ion-conductive battery separator for lithium batteries.)

IT Synthetic polymeric fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(substrate; method of fabrication of ion-conductive battery separator for lithium batteries.)

IT 78-10-4, Tetraethoxysilane 2031-67-6, Methyltriethoxysilane 2530-83-8,
Dynasylan GLYMO 2768-02-7, Dynasylan Silfin
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(method of fabrication of ion-conductive battery separator for lithium batteries.)

IT 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-58-8,
Diethyl carbonate 108-32-7, Propylene carbonate 463-79-6D, Carbonic acid, Li salt 616-38-6, Dimethyl carbonate 4437-85-8, Butylene carbonate 7446-09-5, Sulfur dioxide, uses 7719-09-7, Thionyl chloride 7791-03-9, Lithium perchlorate 13598-36-2D, Phosphoric acid, Li salt 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 56525-42-9, Methyl propyl carbonate, uses 90076-65-6 244761-29-3, Lithium bisoxalatoborate 663935-17-9 663935-18-0
RL: DEV (Device component use); USES (Uses)
(method of fabrication of ion-conductive battery separator for lithium

batteries.)

IT 13765-95-2, Zirconium phosphate
RL: MOA (Modifier or additive use); USES (Uses)
(method of fabrication of ion-conductive battery separator for lithium batteries.)

IT 25038-59-9, Polyethylene terephthalate, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(method of fabrication of ion-conductive battery separator for lithium batteries.)

IT 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses 7631-86-9, Silica,
uses
RL: TEM (Technical or engineered material use); USES (Uses)
(particles, coating; method of fabrication of ion-conductive battery separator for lithium batteries.)

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NEWS 17 FEB 19 Increase the precision of your patent queries -- use terms from the IPC Thesaurus, Version 2009.01
NEWS 18 FEB 23 Several formats for image display and print options discontinued in USPATFULL and USPAT2
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| NEWS | 20 | FEB | 23 | and 2009 MeSH terms
TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 Mesh terms |
|------|----|-----|----|---|
| NEWS | 21 | FEB | 23 | Three million new patent records blast AEROSPACE into STN patent clusters |
| NEWS | 22 | FEB | 25 | USGENE enhanced with patent family and legal status display data from INPADOCDB |
| NEWS | 23 | MAR | 06 | INPADOCDB and INPAFAMDB enhanced with new display formats |
| NEWS | 24 | MAR | 11 | EPFULL backfile enhanced with additional full-text applications and grants |
| NEWS | 25 | MAR | 11 | ESBIOBASE reloaded and enhanced |
| NEWS | 26 | MAR | 20 | CAS databases on STN enhanced with new super role for nanomaterial substances |
| NEWS | 27 | MAR | 23 | CA/Capplus enhanced with more than 250,000 patent equivalents from China |
| NEWS | 28 | MAR | 30 | IMSPATENTS reloaded and enhanced |

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AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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DICTIONARY FILE UPDATES: 31 MAR 2009 HIGHEST RN 1130556-28-3

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> s bis(perfluoro methyl sulfonyl)amide
MISSING OPERATOR 'BIS(PERFLUORO'

=> s bis perfluoro methyl sulfonyl amide
3871329 BIS
2 BISES
3871329 BIS
(BIS OR BISES)
7329 PERFLUORO
1 PERFLUOROS
7329 PERFLUORO
(PERFLUORO OR PERFLUOROS)
27646309 METHYL
98 METHYLS
27646309 METHYL
(METHYL OR METHYLS)
2819234 SULFONYL
1 SULFONYLS
2819234 SULFONYL
(SULFONYL OR SULFONYLS)
9430561 AMIDE
1112 AMIDES
9430561 AMIDE
(AMIDE OR AMIDES)
L1 0 BIS PERFLUORO METHYL SULFONYL AMIDE
(BIS(W)PERFLUORO(W)METHYL(W)SULFONYL(W)AMIDE)

=> s bisperfluoro methyl sulfonyl amide
4 BISPERFLUORO
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98 METHYLS
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2819234 SULFONYL
1 SULFONYLS
2819234 SULFONYL
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1112 AMIDES
9430561 AMIDE
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=> s bisperfluoromethyl sulfonyl amide
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1 SULFONYLS
2819234 SULFONYL
(SULFONYL OR SULFONYLS)
9430561 AMIDE
1112 AMIDES
9430561 AMIDE
(AMIDE OR AMIDES)
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=> s bisperfluoromethyl sulfonyl
2819234 SULFONYL
1 SULFONYLS
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(SULFONYL OR SULFONYL)
L4 0 BISPERFLUOROMETHYL SULFONYL
(BISPERFLUOROMETHYL(W)SULFONYL)

=> s li2zr
L5 9 LI2ZR

=> s 15 and phosphate
289653 PHOSPHATE
388 PHOSPHATES
289653 PHOSPHATE
(PHOSPHATE OR PHOSPHATES)
L6 4 L5 AND PHOSPHATE

=> s 15 and sulfonate
166564 SULFONATE
242 SULFONATES
166564 SULFONATE
(SULFONATE OR SULFONATES)
L7 0 L5 AND SULFONATE

=> s lithium and sulfonate
118858 LITHIUM
166564 SULFONATE
242 SULFONATES
166564 SULFONATE
(SULFONATE OR SULFONATES)
L8 324 LITHIUM AND SULFONATE

=> s lithium zirconium sulfonate
118858 LITHIUM
114345 ZIRCONIUM
166564 SULFONATE
242 SULFONATES
166564 SULFONATE
(SULFONATE OR SULFONATES)
L9 0 LITHIUM ZIRCONIUM SULFONATE
(LITHIUM(W)ZIRCONIUM(W)SULFONATE)

=> s lithium zirconium phosphate
118858 LITHIUM
114345 ZIRCONIUM
289653 PHOSPHATE
388 PHOSPHATES
289653 PHOSPHATE
(PHOSPHATE OR PHOSPHATES)
L10 102 LITHIUM ZIRCONIUM PHOSPHATE
(LITHIUM(W)ZIRCONIUM(W)PHOSPHATE)

=>
Connecting via Winsock to STN

LOGINID:SSPTAZPB1745

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

| Welcome to STN International | | | |
|------------------------------|---|--|--|
| NEWS 1 | Web Page for STN Seminar Schedule - N. America | | |
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| NEWS 3 NOV 26 | MARPAT enhanced with FSORT command | | |
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| NEWS 7 DEC 12 | GBFULL now offers single source for full-text coverage of complete UK patent families | | |
| NEWS 8 DEC 17 | Fifty-one pharmaceutical ingredients added to PS | | |
| NEWS 9 JAN 06 | The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo | | |
| NEWS 10 JAN 07 | WPIDS, WPINDEX, and WPIX enhanced Japanese Patent Classification Data | | |
| NEWS 11 FEB 02 | Simultaneous left and right truncation (SLART) added for CERAB, COMPUAAB, ELCOM, and SOLIDSTATE | | |
| NEWS 12 FEB 02 | GENBANK enhanced with SET PLURALS and SET SPELLING | | |
| NEWS 13 FEB 06 | Patent sequence location (PSL) data added to USGENE | | |
| NEWS 14 FEB 10 | COMFENDEX reloaded and enhanced | | |
| NEWS 15 FEB 11 | WTEXTILES reloaded and enhanced | | |
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| NEWS 18 FEB 23 | Several formats for image display and print options discontinued in USPATFULL and USPAT2 | | |
| NEWS 19 FEB 23 | MEDLINE now offers more precise author group fields and 2009 MeSH terms | | |
| NEWS 20 FEB 23 | TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 MeSH terms | | |
| NEWS 21 FEB 23 | Three million new patent records blast AEROSPACE into STN patent clusters | | |
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| NEWS 23 MAR 06 | INPADOCDB and INPFAMDB enhanced with new display formats | | |
| NEWS 24 MAR 11 | EPFULL backfile enhanced with additional full-text applications and grants | | |
| NEWS 25 MAR 11 | ESBIOBASE reloaded and enhanced | | |
| NEWS 26 MAR 20 | CAS databases on STN enhanced with new super role for nanomaterial substances | | |
| NEWS 27 MAR 23 | CA/Cplus enhanced with more than 250,000 patent equivalents from China | | |

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
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```
=> s lithium zirconium phosphonate sulfonate
    118881 LITHIUM
    114351 ZIRCONIUM
    166593 SULFONATE
        242 SULFONATES
    166593 SULFONATE
                    (SULFONATE OR SULFONATES)
L1          0 LITHIUM ZIRCONIUM PHOSPHONATE SULFONATE
```

```
=> s lithium zirconium phosphate sulfonate  
    118881 LITHIUM  
    114351 ZIRCONIUM  
        2 PHOSPHATE  
    166593 SULFONATE  
        242 SULFONATES  
    166592 CUEONATE
```

(SULFONATE OR SULFONATES)
L2 0 LITHIUM ZIRCONIUM PHOSPHATE SULFONATE
(LITHIUM(W)ZIRCONIUM(W)PHOSPHATE(W)SULFONATE)

=> s lithium zirconium phosphate sulfonate
118881 LITHIUM
114351 ZIRCONIUM
289667 PHOSPHATE
388 PHOSPHATES
289667 PHOSPHATE
(PHOSPHATE OR PHOSPHATES)
166593 SULFONATE
242 SULFONATES
166593 SULFONATE
(SULFONATE OR SULFONATES)
L3 0 LITHIUM ZIRCONIUM PHOSPHATE SULFONATE
(LITHIUM(W)ZIRCONIUM(W)PHOSPHATE(W)SULFONATE)

=> s lithium zirconium phosphonate sulfonate
118881 LITHIUM
114351 ZIRCONIUM
23600 PHOSPHONATE
78 PHOSPHONATES
23600 PHOSPHONATE
(PHOSPHONATE OR PHOSPHONATES)
166593 SULFONATE
242 SULFONATES
166593 SULFONATE
(SULFONATE OR SULFONATES)
L4 0 LITHIUM ZIRCONIUM PHOSPHONATE SULFONATE
(LITHIUM(W)ZIRCONIUM(W)PHOSPHONATE(W)SULFONATE)

=> s lithium and zirconium and phosphonate and sulfonate
118881 LITHIUM
114351 ZIRCONIUM
23600 PHOSPHONATE
78 PHOSPHONATES
23600 PHOSPHONATE
(PHOSPHONATE OR PHOSPHONATES)
166593 SULFONATE
242 SULFONATES
166593 SULFONATE
(SULFONATE OR SULFONATES)
L5 0 LITHIUM AND ZIRCONIUM AND PHOSPHONATE AND SULFONATE

=> s lithium zirconium phophate
118881 LITHIUM
114351 ZIRCONIUM
0 PHOPHATE
L6 0 LITHIUM ZIRCONIUM PHOPHATE
(LITHIUM(W)ZIRCONIUM(W)PHOPHATE)

=> s lithium zirconium phosphate
118881 LITHIUM
114351 ZIRCONIUM
289667 PHOSPHATE
388 PHOSPHATES
289667 PHOSPHATE
(PHOSPHATE OR PHOSPHATES)
L7 102 LITHIUM ZIRCONIUM PHOSPHATE
(LITHIUM(W)ZIRCONIUM(W)PHOSPHATE)

=> d 1

L7 ANSWER 1 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1101112-33-7 REGISTRY
ED Entered STN: 05 Feb 2009
CN Iron lithium zirconium phosphate (Fe0.9LiZr0.05(PO4)) (CA INDEX NAME)
MF Fe . Li . O4 P . Zr
AF Fe0.9 Li O4 P Zr0.05
CI TIS
SR CA
LC STN Files: CA, CAPLUS

| Component | Ratio | Component Registry Number |
|-----------|-------|---------------------------|
| O4P | 1 | 14265-44-2 |
| Zr | 0.05 | 7440-67-7 |
| Li | 1 | 7439-93-2 |
| Fe | 0.9 | 7439-89-6 |

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 11 1-20 /cn

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=> d 11 1-20 cn

L1 HAS NO ANSWERS

L1 0 SEA FILE=REGISTRY ABB=ON PLU=ON LITHIUM ZIRCONIUM PHOSPHONATE SULFONATE

=> d 17 1-20 cn

L7 ANSWER 1 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.9LiZr0.05(PO4)) (CA INDEX NAME)

L7 ANSWER 2 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Cobalt iron lithium zirconium phosphate (Co0.1Fe0.8LiZr0.05(PO4)) (CA INDEX NAME)

L7 ANSWER 3 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.99Li1.02Zr0.01(PO4)) (CA INDEX NAME)

L7 ANSWER 4 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.7-1Li0-1.2Zr0-0.3(PO4)) (CA INDEX NAME)

L7 ANSWER 5 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate (Li0.9-1.1Zr(PO4)) (CA INDEX NAME)

L7 ANSWER 6 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.99Li0.9Zr0.03(PO4)) (CA INDEX NAME)

L7 ANSWER 7 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (FeLi0.98Zr0.01(PO4)) (CA INDEX NAME)

L7 ANSWER 8 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.99Li0.97Zr0.01(PO4)) (CA INDEX NAME)

L7 ANSWER 9 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.99Li0.99Zr0.01(PO4)) (CA INDEX NAME)

L7 ANSWER 10 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (FeLi0.96Zr0.04(PO4)) (CA INDEX NAME)

L7 ANSWER 11 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium zirconium phosphate (Fe0.7-1LiZr0-0.3(PO4)) (CA INDEX NAME)

L7 ANSWER 12 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate silicate
(Li₂.8Zr₁.55-2(PO₄)_{1.2-3}(SiO₄)_{0-1.8}) (CA INDEX NAME)

L7 ANSWER 13 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate (Li₂.8Zr₁.55(PO₄)₃) (CA INDEX NAME)

L7 ANSWER 14 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate silicate
(Li₂.8Zr₁.66(PO₄)_{2.55}(SiO₄)_{0.45}) (CA INDEX NAME)

L7 ANSWER 15 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate silicate
(Li₂.8Zr₁.78(PO₄)_{2.1}(SiO₄)_{0.9}) (CA INDEX NAME)

L7 ANSWER 16 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate silicate
(Li₂.8Zr₁.89(PO₄)_{1.65}(SiO₄)_{1.35}) (CA INDEX NAME)

L7 ANSWER 17 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium phosphate silicate (Li₂.8Zr₂(PO₄)_{1.2}(SiO₄)_{1.8}) (CA INDEX NAME)

L7 ANSWER 18 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lanthanum lithium zirconium phosphate (La_{0.3}Li_{0.1}Zr₂(PO₄)₃) (CA INDEX NAME)

L7 ANSWER 19 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lanthanum lithium zirconium phosphate (La_{0.27}Li_{0.2}Zr₂(PO₄)₃) (CA INDEX NAME)

L7 ANSWER 20 OF 102 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lanthanum lithium zirconium phosphate (La_{0.23}Li_{0.3}Zr₂(PO₄)₃) (CA INDEX NAME)

=> s o3p

L8 1465 O3P
=> s o3p/lc
L9 0 O3P/LC

=> s li and zr and o3p and so3
118129 LI
25345 LIS
143470 LI
(LI OR LIS)
123114 ZR
2 ZRS
123116 ZR
(ZR OR ZRS)
1465 O3P
603 SO3
L10 0 LI AND ZR AND O3P AND SO3

=> s li and zr and o3p
118129 LI
25345 LIS
143470 LI
(LI OR LIS)
123114 ZR
2 ZRS
123116 ZR
(ZR OR ZRS)
1465 O3P
L11 8 LI AND ZR AND O3P

=> d l11 1-8 cn

L11 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium magnesium zirconium metaphosphate nitride oxide
(Li1.1Mg0.8Zr0.1(PO3)N0.100.9) (CA INDEX NAME)

L11 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Iron lithium magnesium zirconium metaphosphate nitride oxide
(Fe0.9Li0.9Mg0.1Zr0.1(PO3)N0.1700.9) (CA INDEX NAME)

L11 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium fluoride metaphosphate oxide (Li3Zr0.1F0.2(PO3)O0.9)
(CA INDEX NAME)

L11 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium metaphosphate oxide (Li2.8Zr0.2(PO3)O0.9) (CA INDEX NAME)

L11 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium nickel zirconium metaphosphate oxide silicate
(LiNi0.9Zr0.05(PO3)O.95O0.75(SiO4)O.1) (CA INDEX NAME)

L11 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Cobalt lithium zirconium metaphosphate oxide silicate
(Co0.9LiZr0.05(PO3)O.95O0.75(SiO4)O.1) (CA INDEX NAME)

L11 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium metaphosphate oxide (Li0.05Zr(PO3)2O1.02) (CA INDEX NAME)

L11 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2009 ACS on STN
CN Lithium zirconium metaphosphate oxide (LiZr2(PO3)3.1O2.95) (CA INDEX

NAME)

=> s li and zr and so3

118129 LI
25345 LIS
143470 LI
(LI OR LIS)

123114 ZR
2 ZRS
123116 ZR
(ZR OR ZRS)

L12 603 SO3
0 LI AND ZR AND SO3

=> s so3

L13 603 SO3

=> s zirconium phosphonates

114351 ZIRCONIUM
78 PHOSPHONATES
L14 0 ZIRCONIUM PHOSPHONATES
(ZIRCONIUM(W)PHOSPHONATES)

=> s zirconium phosphonate

114351 ZIRCONIUM
23600 PHOSPHONATE
78 PHOSPHONATES
23600 PHOSPHONATE
(PHOSPHONATE OR PHOSPHONATES)
L15 0 ZIRCONIUM PHOSPHONATE
(ZIRCONIUM(W)PHOSPHONATE)

=> s zirconium and phosphonate

114351 ZIRCONIUM
23600 PHOSPHONATE
78 PHOSPHONATES
23600 PHOSPHONATE
(PHOSPHONATE OR PHOSPHONATES)

L16 75 ZIRCONIUM AND PHOSPHONATE

=> d l16 1-50 cn

L16 ANSWER 1 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium, bis(η^5 -2,4-cyclopentadien-1-yl)[diethyl
P-(1,2- η)-1-hexyn-1-yl]phosphonate]- (CA INDEX NAME)

L16 ANSWER 2 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, butyl-, zirconium(4+) salt (2:1) (9CI) (CA
INDEX NAME)

OTHER NAMES:

CN Zirconium bis(butylphosphonate)

L16 ANSWER 3 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN

CN Zirconium hydroxide phosphonate ($Zr(OH)_2(HPO_3)$) (8CI) (CA INDEX
NAME)

L16 ANSWER 4 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN

CN Zirconium, bis(η^5 -2,4-cyclopentadien-1-yl)[diethyl
[(1,2- η)-1-heptynyl]phosphonate]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Bis(η^5 -cyclopentadienyl)(diethyl

(1-heptynyl)phosphonate)zirconium

- L16 ANSWER 5 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-hexadecanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Hexadecanamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)
- L16 ANSWER 6 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-pentadecanamine (2:1:2), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Pentadecanamine, compd. with zirconium(4+) phenylphosphonate
(2:1:2), hydrate (9CI)
- L16 ANSWER 7 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-tridecanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Tridecanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 8 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-undecanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Undecanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 9 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-decanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Decanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 10 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-nonanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Nonanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 11 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-heptanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Heptanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 12 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-pentanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Pentanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 13 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-butanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

- CN 1-Butanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 14 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with benzenamine
(2:1:?) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzenamine, compd. with zirconium(4+) phenylphosphonate (?:1:2)
(9CI)
- L16 ANSWER 15 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (2:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
phenylphosphonic acid, hydrate (2:2:1) (9CI)
- L16 ANSWER 16 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Glycine, N-benzoyl-, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (2:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
N-benzoylglycine, hydrate (2:2:1) (9CI)
- L16 ANSWER 17 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzoic acid, 4-nitro-, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (2:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
4-nitrobenzoic acid, hydrate (2:2:1) (9CI)
- L16 ANSWER 18 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzenemethanol, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (4:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
benzenemethanol, hydrate (2:4:1) (9CI)
- L16 ANSWER 19 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzenemethanol, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (2:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
benzenemethanol, hydrate (2:2:1) (9CI)
- L16 ANSWER 20 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate (Zr(HPO4)1.8(HPO3)0.2), hydrate
(2:1) (CA INDEX NAME)
- L16 ANSWER 21 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,10-decanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,10-Decanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)
- L16 ANSWER 22 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,9-nonanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,9-Nonenanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 23 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,8-octanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,8-Octanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 24 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,6-hexanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,6-Hexanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 25 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,5-pentanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,5-Pentanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 26 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,4-butanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,4-Butanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 27 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,3-propanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Propanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 28 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1,2-ethanediamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,2-Ethanediamine, compd. with zirconium(4+) phenylphosphonate
(?:1:2), hydrate (9CI)

L16 ANSWER 29 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-tetradecanamine (2:1:2), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Tetradecanamine, compd. with zirconium(4+) phenylphosphonate
(2:1:2), hydrate (9CI)

L16 ANSWER 30 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-dodecanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Dodecanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)

L16 ANSWER 31 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-decanamine (2:1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Decanamine, compd. with zirconium(4+) phenylphosphonate (1:1:2)

(9CI)

- L16 ANSWER 32 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-octanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Octanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 33 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-heptanamine (2:1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Heptanamine, compd. with zirconium(4+) phenylphosphonate (1:1:2)
(9CI)
- L16 ANSWER 34 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-hexanamine (2:1:?) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Hexanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 35 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-pentanamine (2:1:?) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Pentanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2)
(9CI)
- L16 ANSWER 36 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, zirconium(4+) salt, compd. with
1-propanamine (2:1:?), hydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanamine, compd. with zirconium(4+) phenylphosphonate (?:1:2),
hydrate (9CI)
- L16 ANSWER 37 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium(1+), [μ -[1,1'-bis[2-(phosphono- κ O)ethyl]-4,4'-bipyridiniumato(4-)]dichloro[phosphato(3-)- κ O]di-, chloride,
trihydrate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4,4'-Bipyridinium, 1,1'-bis(2-phosphonoethyl)-, bis(inner salt)
ion(2-), trichloro[phosphato(3-)]dizirconium(2+) (1:1), trihydrate
CN Zirconium(2+), trichloro[phosphato(3-)]di-,
([4,4'-bipyridinium]-1,1'-diylid-2,1-ethanediyl)bis[phosphonate] bis(inner
salt) (1:1), trihydrate
- L16 ANSWER 38 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)_{1.8}(HPO_3)_{0.2}$), monohydrate
(9CI) (CA INDEX NAME)
- L16 ANSWER 39 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)_{1.8}(HPO_3)_{0.2}$) (CA
INDEX NAME)
- L16 ANSWER 40 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)_{1.72}(HPO_3)_{0.28}$), monohydrate
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Zirconium phosphate phosphite ($Zr(HPO_4)_{1.72}(HPO_3)_{0.28}$) monohydrate

L16 ANSWER 41 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)1.72(HPO_3)0.28$) (CA INDEX NAME)

L16 ANSWER 42 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.85(HPO_3)1.15$), hydrate (2:1) (CA INDEX NAME)
OTHER NAMES:
CN Zirconium phosphate phosphite ($Zr(HPO_4)0.85(HPO_3)1.15$) hemihydrate

L16 ANSWER 43 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.85(HPO_3)1.15$) (CA INDEX NAME)

L16 ANSWER 44 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.36(HPO_3)1.64$) (CA INDEX NAME)

L16 ANSWER 45 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, titanium(4+) zirconium(4+) salt, compd. with 3-(triethoxysilyl)-1-propanamine (8:1:3:?) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanamine, 3-(triethoxysilyl)-, compd. with titanium(4+) zirconium(4+) phenylphosphonate (?::1:3:8) (9CI)

L16 ANSWER 46 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.8(HPO_3)1.2$), hydrate (2:1) (CA INDEX NAME)

L16 ANSWER 47 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.8(HPO_3)1.2$) (CA INDEX NAME)

L16 ANSWER 48 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.67(HPO_3)1.33$), hydrate (2:1) (CA INDEX NAME)

L16 ANSWER 49 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl-, compd. with zirconium phosphate phosphonate ($Zr(HPO_4)0.67(HPO_3)1.33$) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.67(HPO_3)1.33$), compd. with 3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diamine (9CI)

L16 ANSWER 50 OF 75 REGISTRY COPYRIGHT 2009 ACS on STN
CN Zirconium phosphate phosphonate ($Zr(HPO_4)0.67(HPO_3)1.33$) (CA INDEX NAME)

=> s zirconium and phosphonate and sulfonate
 114351 ZIRCONIUM
 23600 PHOSPHONATE
 78 PHOSPHONATES
 23600 PHOSPHONATE
 (PHOSPHONATE OR PHOSPHONATES)
 166593 SULFONATE
 242 SULFONATES
 166593 SULFONATE
 (SULFONATE OR SULFONATES)
L17 0 ZIRCONIUM AND PHOSPHONATE AND SULFONATE

=> s zirconium and phosphonate and lithium and sulfonate
 114351 ZIRCONIUM
 23600 PHOSPHONATE
 78 PHOSPHONATES
 23600 PHOSPHONATE
 (PHOSPHONATE OR PHOSPHONATES)
 118881 LITHIUM
 166593 SULFONATE
 242 SULFONATES
 166593 SULFONATE
 (SULFONATE OR SULFONATES)
L18 0 ZIRCONIUM AND PHOSPHONATE AND LITHIUM AND SULFONATE

=> s perfluoromethylsulfonyl
L19 17 PERFLUOROMETHYLSULFONYL

=> d 1-17 cn

L19 ANSWER 1 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN 1H-Imidazolium, 1-ethyl-3-[6-[(1-oxo-2-propenyl)oxy]hexyl]-, salt with
1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1),
polymer with oxybis(2,1-ethanediyoxy-2,1-ethanediyl) di-2-propenoate and
3,6,9,12-tetraoxatetradeca-1,13-diene (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Ethyl-3-[6-[(1-oxo-2-propenyl)oxy]hexyl]-1H-imidazolium
bis(perfluoromethylsulfonyl)imide-tetra(ethylene glycol)
diacrylate-tri(ethylene glycol) divinyl ether copolymer

L19 ANSWER 2 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN 1H-Imidazolium, 1-ethyl-3-[6-[(1-oxo-2-propenyl)oxy]hexyl]-, salt with
1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1)
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Ethyl-3-[6-[(1-oxo-2-propenyl)oxy]hexyl]-1H-imidazolium
bis(perfluoromethylsulfonyl)imide
CN 3-(6-Acryloyloxyhexyl)-1-ethylimidazolium trifluoromethanesulfonylimide

L19 ANSWER 3 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Methanesulfonamide, N,1,1,1-tetrafluoro-N-[(trifluoromethyl)sulfonyl]-
(CA INDEX NAME)
OTHER NAMES:
CN N-Fluorobis(perfluoromethylsulfonyl)imide
CN N-Fluorobis[(trifluoromethyl)sulfonyl]imide

L19 ANSWER 4 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,
ion(1-) (CA INDEX NAME)
OTHER NAMES:
CN Bis(perfluoromethylsulfonyl)imide anion
CN Bis(trifluoromethanesulfonate)imide anion
CN Bis(trifluoromethylsulfonyl)imide ion
CN Bis(trifluoromethylsulfuryl)imide anion
CN Bistriflylimide anion

L19 ANSWER 5 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,
lithium salt (1:1) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,
lithium salt (9CI)
OTHER NAMES:

CN 1,1,1-Trifluoro-N-((trifluoromethyl)sulfonyl)methanesulfonamide lithium salt
CN Bis[(trifluoromethyl)sulfonyl]imide lithium salt
CN Fluorad HQ 115
CN Fluorinert HQ 115
CN Fluorinert HQ 115J
CN HQ 115
CN LiTFSI
CN Lithiotrifluoromethanesulfonimide
CN Lithium bis(perfluoromethylsulfonyl)imide
CN Lithium bis(trifluoromethane sulfone)imide
CN Lithium bis(trifluoromethane)sulfonimide
CN Lithium bis(trifluoromethanesulfonyl)amide
CN Lithium bis(trifluoromethanesulfonyl)imide
CN Lithium bis(trifluoromethylsulfonyl)amide
CN Lithium bis(trifluoromethylsulfonyl)imide
CN Lithium bistriflamide
CN Lithium triflimide
CN MEK 50R
CN N,N-Bis[(trifluoromethyl)sulfonyl]amine lithium salt

L19 ANSWER 6 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phenol, 4-[2,2-bis[(trifluoromethyl)sulfonyl]ethenyl]-2-ethoxy- (CA INDEX NAME)
OTHER NAMES:
CN β,β -Bis(perfluoromethylsulfonyl)-3-ethoxy-4-hydroxystyrene

L19 ANSWER 7 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzene, 1-[2,2-bis[(trifluoromethyl)sulfonyl]ethenyl]-4-nitro- (CA INDEX NAME)
OTHER NAMES:
CN β,β -Bis(perfluoromethylsulfonyl)-p-nitrostyrene

L19 ANSWER 8 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzene, 1-[2,2-bis[(trifluoromethyl)sulfonyl]ethenyl]-2-chloro- (CA INDEX NAME)
OTHER NAMES:
CN β,β -Bis(perfluoromethylsulfonyl)-o-chlorostyrene

L19 ANSWER 9 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzene, [3,3-bis[(trifluoromethyl)sulfonyl]-2-propen-1-yl]- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzene, [3,3-bis[(trifluoromethyl)sulfonyl]-2-propenyl]- (9CI)
OTHER NAMES:
CN 1,1-Bis(perfluoromethylsulfonyl)-3-phenylpropene

L19 ANSWER 10 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Benzene, [2,2-bis[(trifluoromethyl)sulfonyl]ethenyl]- (CA INDEX NAME)
OTHER NAMES:
CN β,β -Bis(perfluoromethylsulfonyl)styrene
CN 1-Phenyl-2,2-bis[(trifluoromethyl)sulfonyl]ethylene

L19 ANSWER 11 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Naphthalene, 1-[2,2-bis[(trifluoromethyl)sulfonyl]ethenyl]- (CA INDEX NAME)
OTHER NAMES:
CN 1,1-Bis(perfluoromethylsulfonyl)-2-(1-naphthyl)ethylene

L19 ANSWER 12 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN
CN Ethane, 1-bromo-1,1-bis[(trifluoromethyl)sulfonyl]- (CA INDEX NAME)

OTHER NAMES:

CN 1,1-Bis(perfluoromethylsulfonyl)-1-bromoethane

L19 ANSWER 13 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN

CN Methane, dichlorobis[(trifluoromethyl)sulfonyl]- (CA INDEX NAME)

OTHER NAMES:

CN 1,1-Bis(perfluoromethylsulfonyl)dichloromethane

L19 ANSWER 14 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN

CN Methane, chlorobis[(trifluoromethyl)sulfonyl]-, ion(1-), potassium (9CI)
(CA INDEX NAME)

OTHER NAMES:

CN Bis(perfluoromethylsulfonyl)chloromethane potassium salt

L19 ANSWER 15 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN

CN Methane, bis[(trifluoromethyl)sulfonyl]-, ion(1-), potassium (8CI, 9CI)
(CA INDEX NAME)

OTHER NAMES:

CN Bis(perfluoromethylsulfonyl)methane potassium salt

CN Bis[(trifluoromethyl)sulfonyl]methane potassium salt

CN Potassium bis(trifluoromethylsulfonyl)methide

L19 ANSWER 16 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN

CN Methane, bromobis[(trifluoromethyl)sulfonyl]-, ion(1-), potassium (8CI,
9CI) (CA INDEX NAME)

OTHER NAMES:

CN Bis(perfluoromethylsulfonyl)bromomethane potassium salt

L19 ANSWER 17 OF 17 REGISTRY COPYRIGHT 2009 ACS on STN

CN Methane, bis[(trifluoromethyl)sulfonyl]- (CA INDEX NAME)

OTHER NAMES:

CN Bis(perfluoromethylsulfonyl)methane

CN Bis(trifluoromethanesulfonyl)methane

CN Bis(trifluoromethylsulfonyl)methane

CN Methyleneeditriflone

=> d his

(FILE 'HOME' ENTERED AT 15:52:23 ON 02 APR 2009)

FILE 'REGISTRY' ENTERED AT 15:52:34 ON 02 APR 2009

| | |
|-----|---|
| L1 | 0 S LITHIUM ZIRCONIUM PHOSPONATE SULFONATE |
| L2 | 0 S LITHIUM ZIRCONIUM PHOSPHATE SULFONATE |
| L3 | 0 S LITHIUM ZIRCONIUM PHOSPHATE SULFONATE |
| L4 | 0 S LITHIUM ZIRCONIUM PHOSPHONATE SULFONATE |
| L5 | 0 S LITHIUM AND ZIRCONIUM AND PHOSPHONATE AND SULFONATE |
| L6 | 0 S LITHIUM ZIRCONIUM PHOPHATE |
| L7 | 102 S LITHIUM ZIRCONIUM PHOSPHATE |
| L8 | 1465 S O3P |
| L9 | 0 S O3P/LC |
| L10 | 0 S LI AND ZR AND O3P AND SO3 |
| L11 | 8 S LI AND ZR AND O3P |
| L12 | 0 S LI AND ZR AND SO3 |
| L13 | 603 S SO3 |
| L14 | 0 S ZIRCONIUM PHOSPHONATES |
| L15 | 0 S ZIRCONIUM PHOSPHONATE |
| L16 | 75 S ZIRCONIUM AND PHOSPHONATE |
| L17 | 0 S ZIRCONIUM AND PHOSPHONATE AND SULFONATE |
| L18 | 0 S ZIRCONIUM AND PHOSPHONATE AND LITHIUM AND SULFONATE |
| L19 | 17 S PERFLUOROMETHYLSULFONYL |

=> s l19 and si
 477940 SI
 16367 SIS
 494145 SI
 (SI OR SIS)

L20 0 L19 AND SI

=> s propylene sulfonate
 18765 PROPYLENE
 1 PROPYLENES
 18765 PROPYLENE
 (PROPYLENE OR PROPYLENES)

166593 SULFONATE
 242 SULFONATES
 166593 SULFONATE
 (SULFONATE OR SULFONATES)

L21 2 PROPYLENE SULFONATE
 (PROPYLENE (W) SULFONATE)

=> d 121 1-2 cn

L21 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
 CN 2-Propene-1-sulfonic acid, sodium salt (1:1), polymer with
 N,N-dimethyl-2-propenamide and 1-ethenyl-2-pyrrolidinone (CA INDEX NAME)
 OTHER NAMES:
 CN N,N-Dimethylacrylamide-sodium propylenesulfonate-N-vinylpyrrolidone
 copolymer

L21 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-propenamide,
 2-propenenitrile and sodium 2-methyl-2-propene-1-sulfonate, graft (9CI)
 (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 2-Propenamide, polymer with methyl 2-methyl-2-propenoate, 2-propenenitrile
 and sodium 2-methyl-2-propene-1-sulfonate, graft (9CI)
 CN 2-Propene-1-sulfonic acid, 2-methyl-, sodium salt, polymer with methyl
 2-methyl-2-propenoate, 2-propenamide and 2-propenenitrile, graft (9CI)
 CN 2-Propenenitrile, polymer with methyl 2-methyl-2-propenoate, 2-propenamide
 and sodium 2-methyl-2-propene-1-sulfonate, graft (9CI)
 OTHER NAMES:
 CN Acrylamide-acrylonitrile-methyl methacrylate-sodium methallylsulfonate
 graft copolymer
 CN Acrylamide-acrylonitrile-methyl methacrylate-sodium methylpropylene
 sulfonate copolymer
 CN Acrylamide-acrylonitrile-methyl methacrylate-sodium methylpropylsulfonate
 graft copolymer

=> s phosphate ethyl phosphonate
 289667 PHOSPHATE
 388 PHOSPHATES
 289667 PHOSPHATE
 (PHOSPHATE OR PHOSPHATES)

12697621 ETHYL
 17 ETHYLS
 12697621 ETHYL
 (ETHYL OR ETHYLS)

23600 PHOSPHONATE
 78 PHOSPHONATES
 23600 PHOSPHONATE
 (PHOSPHONATE OR PHOSPHONATES)

L22 0 PHOSPHATE ETHYL PHOSPHONATE

(PHOSPHATE (W) ETHYL (W) PHOSPHONATE)

=> s phosphate and ethyl and phosphonate

289667 PHOSPHATE

388 PHOSPHATES

289667 PHOSPHATE

(PHOSPHATE OR PHOSPHATES)

12697621 ETHYL

17 ETHYLS

12697621 ETHYL

(ETHYL OR ETHYLS)

23600 PHOSPHONATE

78 PHOSPHONATES

23600 PHOSPHONATE

(PHOSPHONATE OR PHOSPHONATES)

L23 155 PHOSPHATE AND ETHYL AND PHOSPHONATE

=> s l23 and zr

123114 ZR

2 ZRS

123116 ZR

(ZR OR ZRS)

L24 0 L23 AND ZR

=> s l23 and si

477940 SI

16367 SIS

494145 SI

(SI OR SIS)

L25 0 L23 AND SI

=> s phosphate and (ethyl or methyl or butyl or phenyl or toyl or zylyl) and phosphonate

289667 PHOSPHATE

388 PHOSPHATES

289667 PHOSPHATE

(PHOSPHATE OR PHOSPHATES)

12697621 ETHYL

17 ETHYLS

12697621 ETHYL

(ETHYL OR ETHYLS)

27672891 METHYL

98 METHYLS

27672891 METHYL

(METHYL OR METHYLS)

2165528 BUTYL

9 BUTYLS

2165528 BUTYL

(BUTYL OR BUTYLS)

22384487 PHENYL

14 PHENYLS

22384487 PHENYL

(PHENYL OR PHENYLS)

98516 TOLYL

23600 PHOSPHONATE

78 PHOSPHONATES

23600 PHOSPHONATE

(PHOSPHONATE OR PHOSPHONATES)

L26 285 PHOSPHATE AND (ETHYL OR METHYL OR BUTYL OR PHENYL OR TOLYL OR ZYLYL) AND PHOSPHONATE

=> s l26 and (si or zr or silicon or zirconium or zirconate)

477940 SI
16367 SIS
494145 SI
(SI OR SIS)
123114 ZR
2 ZRS
123116 ZR
(ZR OR ZRS)
112157 SILICON
114351 ZIRCONIUM
4710 ZIRCONATE
L27 3 L26 AND (SI OR ZR OR SILICON OR ZIRCONIUM OR ZIRCONATE)

=> d 127 1-3 cn

L27 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
CN Phosphonic acid, phenyl-, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (2:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
phenylphosphonic acid, hydrate (2:2:1) (9CI)

L27 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl-, compd. with
zirconium phosphate phosphonate (Zr(HPO4)0.67(HPO3)1.33) (9CI) (CA
INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.67(HPO3)1.33), compd. with
3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diamine (9CI)

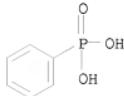
L27 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
CN Octadecanoic acid, monoester with 1,2,3-propanetriol
mono(2-hydroxypropanoate), mixt. with N-butylbenzenesulfonamide, dibutyl
butylphosphonate, 2,2-dichloroethenyl dimethyl phosphate,
2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol] and 1,2,3-propanetriol diacetate
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,2,3-Propanetriol, diacetate, mixt. contg. (9CI)
CN Benzenesulfonamide, N-butyl-, mixt. contg. (9CI)
CN Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-, mixt. contg. (9CI)
CN Phosphonic acid, butyl-, dibutyl ester, mixt. contg. (9CI)
CN Phosphoric acid, 2,2-dichloroethenyl dimethyl ester, mixt. contg.
(9CI)
OTHER NAMES:
CN DDVP-benzenesulphonbutylamide-triethylene glycol-dibutyl
butylphosphonate-diacetin-silicone-glyceryl lauro stearate mixture

=> d 127 1-3

L27 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
RN 218938-96-6 REGISTRY
ED Entered STN: 04 Feb 1999
CN Phosphonic acid, phenyl-, compd. with zirconium phosphate phosphonate
(Zr(HPO4)0.7(HPO3)1.3), hydrate (2:2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Zirconium phosphate phosphonate (Zr(HPO4)0.7(HPO3)1.3), compd. with
phenylphosphonic acid, hydrate (2:2:1) (9CI)
MF C6 H7 O3 P . 1/2 H2O . H O4 P . H O3 P . Zr
AF C6 H7 O3 P . H2 O6.7 P2 Zr . 1/2 H2O
SR CA
LC STN Files: CA, CAPLUS

CM 1

CRN 1571-33-1
CMF C6 H7 O3 P



CM 2

CRN 120620-74-8
CMF H O4 P . H O3 P . Zr
CCI TIS

CM 3

CRN 15477-76-6
CMF H O3 P



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 4

CRN 14066-19-4
CMF H O4 P



CM 5

CRN 7440-67-7
CMF Zr

Zr

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

RN 144544-70-7 REGISTRY

ED Entered STN: 20 Nov 1992

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl-, compd. with zirconium phosphate phosphonate ($Zr(HPO_4)_{0.67}(HPO_3)_{1.33}$) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Zirconium phosphate phosphonate ($Zr(HPO_4)_{0.67}(HPO_3)_{1.33}$), compd. with 3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diamine (9CI)

MF C13 H20 N2 . x H O4 P . x H O3 P . x Zr

AF C16 H20 N2 . x H2 O6.67 P2 Zr

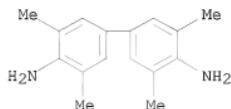
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 54827-17-7

CMF C16 H20 N2



CM 2

CRN 144544-69-4

CMF H O4 P . H O3 P . Zr

CCI TIS

CM 3

CRN 15477-76-6

CMF H O3 P



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 4

CRN 14066-19-4

CMF H O4 P



CM 5

CRN 7440-67-7
CMF Zr

Zr

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L27 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
RN 8072-78-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Octadecanoic acid, monoester with 1,2,3-propanetriol
mono(2-hydroxypropanoate), mixt. with N-butylbenzenesulfonamide, dibutyl
butylphosphonate, 2,2-dichloroethenyl dimethyl phosphate,
2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol] and 1,2,3-propanetriol diacetate
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2,3-Propanetriol, diacetate, mixt. contg. (9CI)
CN Benzenesulfonamide, N-butyl-, mixt. contg. (9CI)
CN Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-, mixt. contg. (9CI)
CN Phosphonic acid, butyl-, dibutyl ester, mixt. contg. (9CI)
CN Phosphoric acid, 2,2-dichloroethenyl dimethyl ester, mixt. contg.
(9CI)

OTHER NAMES:

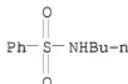
CN DDVP-benzenesulphonbutylamide-triethylene glycol-dibutyl
butylphosphonate-diacetin-silicone-glyceryl lauro stearate mixture
MF C24 H46 O6 . C12 H27 O3 P . C10 H15 N O2 S . C7 H12 O5 . C6 H14 O4 . C4 H7
C12 O4 P

CI MXS

LC STN Files: CA, CAPLUS

CM 1

CRN 3622-84-2
CMF C10 H15 N O2 S



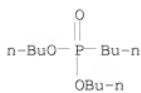
CM 2

CRN 112-27-6
CMF C6 H14 O4



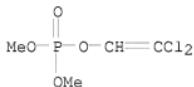
CM 3

CRN 78-46-6
CMF C12 H27 O3 P



CM 4

CRN 62-73-7
 CMF C4 H7 Cl2 O4 P



CM 5

CRN 30234-20-9
 CMF C24 H46 O6
 CCI IDS

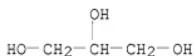
CM 6

CRN 57-11-4
 CMF C18 H36 O2



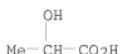
CM 7

CRN 56-81-5
 CMF C3 H8 O3



CM 8

CRN 50-21-5
 CMF C3 H6 O3



CM 9

CRN 25395-31-7
CMF C7 H12 O5
CCI IDS

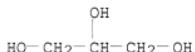
CM 10

CRN 64-19-7
CMF C2 H4 O2



CM 11

CRN 56-81-5
CMF C3 H8 O3



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

| => file zcaplus | SINCE FILE | TOTAL |
|----------------------|------------|---------|
| COST IN U.S. DOLLARS | ENTRY | SESSION |
| FULL ESTIMATED COST | 646.75 | 646.97 |

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FILE COVERS 1907 - 2 Apr 2009 VOL 150 ISS 14
FILE LAST UPDATED: 1 Apr 2009 (20090401/ED)

ZCaplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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=> d his

(FILE 'HOME' ENTERED AT 15:52:23 ON 02 APR 2009)

FILE 'REGISTRY' ENTERED AT 15:52:34 ON 02 APR 2009
L1 0 S LITHIUM ZIRCONIUM PHOSPHONATE SULFONATE
L2 0 S LITHIUM ZIRCONIUM PHOSPHATE SULFONATE
L3 0 S LITHIUM ZIRCONIUM PHOSPHATE SULFONATE
L4 0 S LITHIUM ZIRCONIUM PHOSPHONATE SULFONATE
L5 0 S LITHIUM AND ZIRCONIUM AND PHOSPHONATE AND SULFONATE
L6 0 S LITHIUM ZIRCONIUM PHOPHATE
L7 102 S LITHIUM ZIRCONIUM PHOSPHATE
L8 1465 S O3P
L9 0 S O3P/LC
L10 0 S LI AND ZR AND O3P AND SO3
L11 8 S LI AND ZR AND O3P
L12 0 S LI AND ZR AND SO3
L13 603 S SO3
L14 0 S ZIRCONIUM PHOSPHONATES
L15 0 S ZIRCONIUM PHOSPHONATE
L16 75 S ZIRCONIUM AND PHOSPHONATE
L17 0 S ZIRCONIUM AND PHOSPHONATE AND SULFONATE
L18 0 S ZIRCONIUM AND PHOSPHONATE AND LITHIUM AND SULFONATE
L19 17 S PERFLUOROMETHYLSULFONYL
L20 0 S L19 AND SI
L21 2 S PROPYLENE SULFONATE
L22 0 S PHOSPHATE ETHYL PHOSPHONATE
L23 155 S PHOSPHATE AND ETHYL AND PHOSPHONATE
L24 0 S L23 AND ZR
L25 0 S L23 AND SI
L26 285 S PHOSPHATE AND (ETHYL OR METHYL OR BUTYL OR PHENYL OR TOLYL OR
L27 3 S L26 AND (SI OR ZR OR SILICON OR ZIRCONIUM OR ZIRCONATE)

FILE 'ZCAPLUS' ENTERED AT 16:19:50 ON 02 APR 2009

=> s 127
L28 4 L27

=> d 128 ti

L28 ANSWER 1 OF 4 ZCAPLUS COPYRIGHT 2009 ACS on STN
TI A study on the synthesis and oxidation properties of chromic-mixed
zirconium phenylphosphonate

=> d 128 1-4 ti pn

L28 ANSWER 1 OF 4 ZCAPLUS COPYRIGHT 2009 ACS on STN
TI A study on the synthesis and oxidation properties of chromic-mixed
zirconium phenylphosphonate

L28 ANSWER 2 OF 4 ZCAPLUS COPYRIGHT 2009 ACS on STN
TI Thermoanalytical investigation of several layered zirconium salts and
their derivatives part. II

L28 ANSWER 3 OF 4 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Study of the intercalation of tetramethylbenzidine in layered zirconium phosphates to obtain pillared materials

L28 ANSWER 4 OF 4 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Insecticidal compositions for diffusion by vaporization
PATENT NO. KIND DATE
----- -----
PI FR 1603822 19710716

=> file reg
COST IN U.S. DOLLARS SINCE FILE TOTAL
FULL ESTIMATED COST ENTRY SESSION
5.52 652.49

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STRUCTURE FILE UPDATES: 1 APR 2009 HIGHEST RN 1131012-40-2
DICTIONARY FILE UPDATES: 1 APR 2009 HIGHEST RN 1131012-40-2

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<http://www.cas.org/support/stndoc/properties.html>

=> s silicon and sulfonate
112157 SILICON
166593 SULFONATE
242 SULFONATES
166593 SULFONATE
(SULFONATE OR SULFONATES)
L29 36 SILICON AND SULFONATE

=> s silicon and sulfonate and lithium
112157 SILICON
166593 SULFONATE
242 SULFONATES
166593 SULFONATE
(SULFONATE OR SULFONATES)
118881 LITHIUM
L30 0 SILICON AND SULFONATE AND LITHIUM

=> file zcplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
FULL ESTIMATED COST ENTRY SESSION
27.23 679.72

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FILE COVERS 1907 - 2 Apr 2009 VOL 150 ISS 14
FILE LAST UPDATED: 1 Apr 2009 (20090401/ED)

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=> s 129
L31 21 L29

=> d 131 1-32 ti pn

L31 ANSWER 1 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Complexation of tris(pentafluorophenyl)silanes with neutral Lewis bases

L31 ANSWER 2 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Positive chargeable composition for toner based on silicon complex and charging member using the same
PATENT NO. KIND DATE
----- -----
PI JP 2007298966 A 20071115

L31 ANSWER 3 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Positive electrified charge control agent and positive electrified toner for developing electrostatic image
PATENT NO. KIND DATE
----- -----
PI US 20070231726 A1 20071004
KR 2007099439 A 20071009
EP 1843214 A1 20071010
JP 2007298965 A 20071115
CN 101051193 A 20071010

L31 ANSWER 4 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Silica triflate as an efficient reagent for the solvent-free synthesis of coumarins

L31 ANSWER 5 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis and molecular and crystal structures of mono-and bis-chelate

hypercoordinate silicon compounds containing the C,O-chelating
2,2-dimethyl-4-oxo-2,3-dihydro-1,3-oxazin-3-ylmethyl ligand

L31 ANSWER 6 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Assembling a Mixed Phthalocyanine-Porphyrin Array in Aqueous Media through Host-Guest Interactions

L31 ANSWER 7 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Self-doped conductive polymer-silicon hybrids from atom transfer radical graft copolymerization of sodium styrenesulfonate with polyaniline covalently tethered on the Si(100) surface

L31 ANSWER 8 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Functionalization of hydrogen-terminated silicon with polybetaine brushes via surface-initiated reversible addition-fragmentation chain-transfer (RAFT) polymerization

L31 ANSWER 9 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Photochemical studies of tetra-2,3-pyridinoporphyrazines

L31 ANSWER 10 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Method for preparing quinazolinyl-substituted [1,4]diazepino[6,7,1-h]indol-4-ones and analogs by cyclocondensation of 2-(alkyldieneamino)-N-(diazepinolindolyl)benzamides and analogs using weak Lewis acid catalysts

| PATENT NO. | KIND | DATE |
|----------------|------|----------|
| WO 2001002403 | A1 | 20010111 |
| FR 2795731 | A1 | 20010105 |
| FR 2795731 | B1 | 20010907 |
| CA 2376707 | A1 | 20010111 |
| BR 2000012532 | A | 20020402 |
| EP 1196418 | A1 | 20020417 |
| EP 1196418 | B1 | 20040616 |
| HU 2002001635 | A2 | 20020928 |
| HU 2002001635 | A3 | 20041228 |
| JP 2003503498 | T | 20030128 |
| EE 200100700 | A | 20030415 |
| NZ 516287 | A | 20030630 |
| AU 772966 | B2 | 20040513 |
| AT 269334 | T | 20040715 |
| CN 1166668 | C | 20040915 |
| NO 2001005271 | A | 20011228 |
| IN 2001MN01623 | A | 20070601 |
| BG 106264 | A | 20020830 |
| HR 20010000952 | A1 | 20030630 |
| ZA 20020000114 | A | 20020829 |
| MX 20020000257 | A | 20030820 |
| US 6689881 | B1 | 20040210 |

L31 ANSWER 11 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Influence of the solvent and of the counteranion on the structure of silyl cations stabilized by a terdentate aryl diamine ligand

L31 ANSWER 12 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI 2-(Alkoxyethyl)phenylsilicon compounds: the search for pentacoordination

L31 ANSWER 13 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Polymer-modified inorganic oxide colloidal particles

| PATENT NO. | KIND | DATE |
|-------------|------|----------|
| JP 05287213 | A | 19931102 |

JP 3122688

B2 20010109

L31 ANSWER 14 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of new monomeric, oligomeric, and polymeric silyl triflates

L31 ANSWER 15 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Grafted inorganic materials for composites

| PATENT NO. | KIND | DATE |
|-------------|------|----------|
| EP 212621 | A2 | 19870304 |
| EP 212621 | A3 | 19890125 |
| EP 212621 | B1 | 19931013 |
| JP 62050313 | A | 19870305 |
| JP 05049693 | B | 19930727 |
| JP 62050314 | A | 19870305 |
| JP 05049694 | B | 19930727 |
| US 4783501 | A | 19881108 |
| US 4910251 | A | 19900320 |

L31 ANSWER 16 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Complexed compounds

| PATENT NO. | KIND | DATE |
|-------------|------|----------|
| DE 2739312 | A1 | 19780309 |
| DE 2739312 | C2 | 19900308 |
| CH 623353 | A5 | 19810529 |
| NL 7709754 | A | 19780310 |
| CA 1103689 | A1 | 19810623 |
| BE 858464 | A1 | 19780307 |
| GB 1584049 | A | 19810204 |
| US 4404408 | A | 19830913 |
| JP 53034730 | A | 19780331 |
| JP 62022975 | B | 19870520 |
| FR 2364260 | A1 | 19780407 |
| FR 2364260 | B1 | 19800425 |

L31 ANSWER 17 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Silicon chelates

| PATENT NO. | KIND | DATE |
|-------------|------|----------|
| JP 51075027 | A | 19760629 |
| JP 55049056 | B | 19801210 |

L31 ANSWER 18 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Selective debenzyloxy carbonylation in peptides with trifluoroacetic acid

L31 ANSWER 19 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Cooperative effects of functional groups in peptides. I. Aspartyl-serine derivatives

L31 ANSWER 20 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Preparation and decomposition of fluorosulfonates

L31 ANSWER 21 OF 21 ZCPLUS COPYRIGHT 2009 ACS on STN
TI Spectrophotometric research in chlorocopper complexes in acetone. I

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